REMARKS

Claims 1-12 are pending in the above-identified application.

Issues Under 35 U.S.C. 103(a)

Claims 1-4 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagishi '563 (USP 5,779,563).

This rejection is traversed for the following reasons.

Summary of Position of Patent Examiner in Final Office Action

It is the basic position of the Patent Examiner that Yamagishi '563 discloses a golf ball having a core **1** with a maximum diameter of 41 mm (col. 3, lines 53-55), an inner layer **2** with a thickness of 0.3-2.5 mm (col. 4, lines 33-37), and an outer layer **3** having a thickness of 0.3-2.5 mm (col. 4, lines 33-37). The Examiner simply takes the maximum end point for all of these diameters and arrives at a maximum diameter of 46-51 mm which is within the range recited in the present claims.

Based on the calculations described immediately below, it is not possible to simply take the maximum diameter and layer thickness end points to obtain a maximum diameter of 46-51 mm consistent with the Yamagishi '563 disclosure. Thus, this position is incorrect.

Yamagishi '563 Prohibits Golf Ball Diameter of 46 mm

Although one may simply take the maximum end points of the various diameter and thickness ranges for the core and outer layers described in Yamagishi '563, the resulting golf ball would fail to satisfy the maximum weight requirements of the Rules of Golf (R&A) of 45.93 grams as noted at column 1, lines 21-24 of Yamagishi '563. The reason for this is because of the specific gravity requirements of the golf ball of Yamagishi '563. More specifically, the following calculations show that an attempt to use the maximum diameter/thickness range end points of Yamagishi '563 results in a golf ball having a weight well over the maximum weight limit for the Rules of Golf mentioned in Yamagishi '563.

Diameter/Thickness Dimensions

of Yamagishi '563

Core of maximum diameter of 41 mm (or 2.05 cm radius)

Inner layer of 2.5 mm thickness (or radius of 2.3 cm when combined with core diameter of 41 mm)

Outer layer of thickness of 2.5 mm (or radius of 2.55 cm when combined with 41 mm core/2.5 mm inner layer)

Ball Volume Calculations

Core = 36.9 cc

Core plus inner layer = 50.97 cc

Core plus inner layer plus outer layer = 69.46 cc

Volume of inner layer = 14.88 cc

Volume of outer layer = 18.49 cc

Calculation of Weight of Golf Ball

Assuming the minimum specific gravity for the core of 1.00 (col. 2, lines 64-65), the minimum specific gravity for the inner layer of 0.9 (col. 4, lines 28-30), and the minimum specific gravity for the outer layer of 1.10 (col. 4, lines 1-3), the weight of a golf ball having the above-noted dimensions may be calculated using the following equation:

(1.00)(36.09) + (0.90)(14.88) + (1.10)(18.49) = 69.82 grams. Thus, the result of 69.82 grams is well over the maximum limit of 45.93 grams mentioned in Yamagishi '563. In fact, even if the inner layer and outer layer thicknesses are each reduced to 1.25 mm, the resulting total golf ball weight is about 50.4 grams which is still well over the maximum allowed limit. Consequently, the core, inner layer and outer layer dimensions must be chosen together with the specific gravity features in combination in order to arrive at an appropriate golf ball weight. The suggestion that

Yamagishi '563 discloses a golf ball having a maximum diameter of 51 mm is significantly inconsistent with the disclosure by Yamagishi '563 of the specific gravity requirements and the maximum golf ball weight of 45.93 grams such that this interpretation of Yamagishi '563 is simply incorrect.

Yamagishi '563 Must be Interpreted Correctly

Based on the above-noted calculations which directly correspond to the disclosure of Yamagishi '563, and in view of the additional distinctions between the present claims and Yamagishi '563 discussed below, it is submitted that this reference simply fails to disclose or suggest the present invention. It is further submitted that Yamagishi '563 must be interpreted consistently and correctly as a prior art reference such that the maximum diameter and thickness range end points simply cannot be chosen. In fact, even if more intermediate dimensions are chosen as noted above, the golf ball weight limit may still be violated and may be inconsistent with the remaining disclosure of Yamagishi '563. The calculations above also provide further evidence that a person skilled in the art must search throughout the disclosure of Yamagishi '563 without any adequate direction or suggestion provided by Yamagishi '563 towards obtaining the present invention. Consequently, it is requested that the above-noted rejection be

withdrawn. The following points are being re-submitted and were previously provided in the Reply filed September 30th.

Present Invention and Its Advantages

The present invention is directed to golf balls having a large diameter in combination with other properties, such as a moment of inertia, as recited in the present claims. As stated in the paragraph at the bottom of page 1 to the top of page 2 of the specification, golf balls having a diameter larger than the lower USGA diameter limit of 42.67 mm are: [1] generally not larger in diameter than 42.80 mm; and [2] exhibit higher air resistance leading to deceleration and shorter flight distance. Surprisingly, the inventors of the present invention have discovered that a golf ball having a diameter as large as 43.0 mm or greater may be made according to the disclosure of the present application, and such a golf ball exhibits advantageously improved properties, including advantageously improved flight distance or "carry". This is clear from the discussion and experimental test results described at pages 12-20 of the present specification, as well as in Tables 1-4.

Distinctions Between Present Invention and Yamagishi '563

Yamagishi '563 discloses a golf ball which is "improved in flying distance" [column 1, lines 13-16], wherein the golf ball has

a cover with a specific gravity of 1.10-1.25 and a moment of 84.8-85.8 for Examples 1-4 as shown in Table 4 at columns 7-10. Yamagishi '563 discloses that "prior art" golf balls are manufactured to have a "diameter of not less than 42.67 mm" [column 1, lines 19-24], and that an object of the golf ball invention described therein was to provide a golf ball which "... is improved in flying distance...," [column 1, lines 51-57]. Yamagishi '563 further discloses at column 3, lines 53-55 that the sold core **1** has a diameter of 25-41 mm; and at column 4, lines 33-37 that the cover inner layer has a thickness of 0.3-2.5 mm and the cover outer layer has a thickness of 0.3-2.5 mm. Finally, Yamagishi '563 discloses in Table 4 various examples and comparative examples of golf balls which all have a diameter of 42.70 mm.

Yamagishi '563 fails to disclose or suggest anywhere a golf ball having a diameter greater than 42.70 mm. In other words, it is clear from a correct interpretation of Yamagishi '563 that this document describes golf balls having a diameter of equal to or just greater than the lower diameter limit of 42.67 mm required by "R & A" Rules of Golf. Yamagishi '563 fails to disclose or suggest anywhere any technique for designing larger diameter golf balls having a minimum diameter of 43.0 mm in order to achieve flight distance properties comparable to and greater than the more common golf ball design employing a diameter of 42.7 mm. In this regard,

note in Table 4 at page 19 of the present specification that Examples 1-6 (present invention) all exhibit a greater flight distance or "carry" when compared to Comparative Example 1 which has a diameter of 42.7 mm. Since Yamagishi '563 fails to address any problems associated with air resistance or any other problems that arise in connection with designing a larger diameter golf ball having a diameter of at least 43.0 mm, Yamagishi '563 fails to provide any adequate suggestion to a person skilled in the art towards the present invention. Consequently, significant patentable distinctions exist between the present invention and Yamagishi '563 such that the above-noted rejection should be withdrawn.

In addition to the above, it is noted that the mere fact that a reference, such as Yamagishi '563, can be modified does not render the resulting modification "obvious" unless the reference also suggests the desirability of the modification. *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990); MPEP 2143.0, Rev. 2, May 2004, page 2100-131. In addition, the fact that the claimed invention may be within the capabilities of one of ordinary skill in the art fails to be sufficient, by itself, to establish *prima facie* obviousness. *Ex parte Levengood*, 28 USPQ2d 1300, BPAI 1993; *In re Kotzab*, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000). All of the above-cited legal authority applies to the present situation, since

Yamagishi '563 provides absolutely no suggestion whatsoever to use the largest thicknesses and diameters of the multiple layers in order to form a golf ball having a diameter of at least 43.0 mm within the range of the larger golf ball diameter of the present invention. Yamagishi '563 provides no examples of such an embodiment, and it is clear that Yamagishi '563 addresses no design issues in connection with designing a larger diameter golf ball. In fact, an attempt to employ the upper end point of all of the thickness and diameter ranges of the multiple layers of the golf ball of Yamagishi '563 would result in a golf ball having higher air resistance and shorter flight distance which would be a modification that would render the golf ball of Yamagishi '563 unsatisfactory for its intended purpose of achieving a greater flight distance property. Thus, Yamagishi '563 is correctly interpreted to fail to provide any adequate suggestion or motivation to employ such a modification in order to obtain the present invention. *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1194). Consequently, it is submitted that Yamagishi '563 fails to provide any adequate basis for asserting prima facie obviousness under appropriate applicable legal standards.

Conclusion

It is submitted for the reasons stated above that the present claims define patentable subject matter such that this application should now be placed condition for allowance.

If any questions arise regarding the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By _____
Andrew D. Meikle, #32,868

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

ADM:gmh
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